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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/923,461	09/04/1997	VIET LE	RIC-96-153	2639

25537 7590 02/03/2003

WORLD.COM, INC.
TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW
WASHINGTON, DC 20036

EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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Office Action Summary

Application No.

08/923,461

Applicant(s)

LE ET AL.

Examiner

M. R. Sedighian

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2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 77-82 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 77-82 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

1. This communication is responsive to applicant's 10/28/2002 amendment in the application of Viet Le et al. for "Method and System for Modulator Multiplexing and Amplification in a Multi-Channel Plan", filed 09/04/1997. The amendment to the claim have been entered. Claims 77-82 are now pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 77-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 77 and 81, it is not clear what it means by "... a second plurality of fine wavelength division demultiplexers ...". It is not clear about the second plurality of fine wavelength division demultiplexers, since there is no first plurality of wavelength division demultiplexers are claimed.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 77-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US patent No: 5,909,295) in view of Roberts et al. (US patent No: 5,801,858), or Fee et al. (US patent No: 5,94,794), or Fatehi et al. (US patent No: 5,959,767).

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Regarding claims 77 and 81, as it is understood, Li discloses a system for multiplexing/demultiplexing optical signals (col. 1, lines 4-8) in a set of multiple channels (col. 2, lines 10-14) within an operating window (Red Band + Blue Band, fig. 7) of a fiber communication network (col. 5, lines 45-61 and fig. 7), comprising: coarse wavelength multiplexing (70b, FBG10,11, FBG13,14, FBG16,17, fig. 7) /demultiplexing unit (70a, FBG2,3, FBG5,6, FBG8,9, fig. 7) configured to support bi-direction optical signal traffic (col. 1, lines 1-2, 32-33), the optical signal traffic comprising a first set of subgroups of optical signals traveling in a first direction (λ_{12} , λ_{15} , λ_{18} , fig. 7) and a second set of subgroups of optical signals traveling in a second direction (λ_1 , λ_4 , λ_7 , fig. 7), a first plurality of fine wavelength division multiplexers (Filters 12, 15, fig. 7) configured to support uni-directional traffic comprising the first set of subgroups of optical signals (λ_{12} , λ_{15} , λ_{18} , fig. 7), a first plurality of fine wavelength division demultiplexers (Filters 1, 4, 7, fig. 7) configured to support uni-directional traffic comprising the second set of subgroups of optical signals (λ_1 , λ_4 , λ_7 , fig. 7). Li differs from the claimed invention in that Li does not disclose a plurality of first and a second optical line amplifiers for amplifying the different respective subgroups of first and second set of optical signals. Roberts teaches an optical communication system (fig. 7C) for bi-direction transmission and reception (Tx, Rx, fig. 7C) of a plurality of optical signals of different wavelengths (Red and Blue, fig. 7C) that are amplified by different optical line amplifiers (col. 9, lines 63-67). Fee teaches optical line amplifiers (23a, 23b, 23n, fig. 1) along different optical fiber lines (19a, 19b, 19n, fig. 1) for amplifying different band of optical signals (col. 3, lines 40-67). Fatehi teaches optical line amplifiers (1002-1, 1002-2, 1002-N, fig. 10) along different fiber lines (1001-1, 1001-2, 1001-N, fig. 10). Furthermore, it is well known that optical line amplifiers can be placed anywhere along

different transmission paths to restore the signal to a desired level. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a plurality of optical line amplifiers such as the ones of Roberts, or Fee, or Fatehi, along the respective optical fiber lines in the multiplex/demultiplex transmission system of Li in order to boost the respective subgroup of optical signals that are attenuated during the transmission. As to claim 81, Fatehi further teaches optical line amplifiers (1002-1, 1002-2, 1002-3, fig. 10) can be configured (1007, 1003, fig. 10) to substantially equalize gain across the set of channels within the operating window (col. 4, lines 11-34).

Regarding claim 78, Li discloses the first set of subgroups of optical signals (λ_{12} , λ_{15} , λ_{18} , fig. 7) corresponds to a first set of subwindows (Red Band, fig. 7) within the operating window (Red Band + Blue Band, fig. 7).

Regarding claim 79, Li discloses each of the first set of subgroups corresponds to different channels of the set of multiple channels (λ_{12} , λ_{15} , λ_{18} , fig. 7).

Regarding claim 80, Li discloses the second set of subgroups of optical signals (λ_1 , λ_4 , λ_7 , fig. 7) corresponds to a second set of subwindows (Blue Band, fig. 7) within the operating window (Red Band + Blue Band, fig. 7).

Regarding claim 82, Li discloses the first direction is opposite to the second direction (col. 1, lines 32-33).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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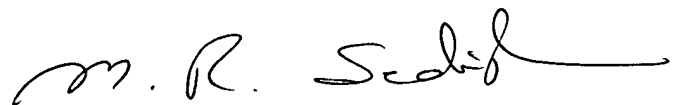
Nakano (US patent No: 5,831,754) is cited to show a dispersion compensation module (203a, fig. 14) that is connected to optical amplifiers (201a, 201b, fig. 14) to equalize the gain.

Bergano (US patent No: 6,137,604) is cited to show a dispersion equalizer (105, fig. 1) that is connected to an optical amplifier (103, fig. 1) to equalize the gain (col. 9, lines 1-22, 47-49).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



M. R. SEDIGHIAN
Patent Examiner
Art Unit 2633